Comparisons of Job Characteristics

Focus Occupation: Engineers, All Other (17-2199)
Associated Occupation: Industrial Engineers (17-2112)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Engineers, All Other (17-2199)
Associated Occupation: Industrial Engineers (17-2112)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	18.0	20.1	>	Current knowledge level is likely sufficient
Production and Processing	6.0	17.4	12.9	<<	Extensive education and/or training may be required
Mathematics	9.2	15.6	17.1	0	Current knowledge level may be sufficient
Mechanical	6.8	15.6	14.0	<	Expanded education and/or training may be required
Design	5.2	14.8	16.5	>	Current knowledge level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 81

Focus Occupation: Engineers, All Other (17-2199)
Associated Occupation: Industrial Engineers (17-2112)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Reading Comprehension	10.7	14.8	15.1	0	Current skill level may be sufficient
Complex Problem Solving	9.1	12.8	12.7	0	Current skill level may be sufficient
Writing	9.2	12.8	12.7	0	Current skill level may be sufficient
Monitoring	9.9	12.2	11.8	0	Current skill level may be sufficient
Mathematics	6.2	10.3	12.8	>	Skill level is likely sufficient
Systems Analysis	6.5	9.9	11.7	>	Skill level is likely sufficient
Systems Evaluation	6.4	9.5	11.1	>	Skill level is likely sufficient
Management of Material Resources	3.7	7.2	5.9	<	A higher skill level may be required

Management of Financial Resources	3.3	6.0	5.8	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Engineers, All Other (17-2199)
Associated Occupation: Industrial Engineers (17-2112)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Written Comprehension	11.0	14.6	15.1	0	Current ability level may be sufficient
Written Expression	9.8	14.1	13.2	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.6	14.0	0	Current ability level may be sufficient
Inductive Reasoning	10.2	12.8	13.7	0	Current ability level may be sufficient
Information Ordering	9.9	11.8	13.2	>	Current ability level is likely sufficient
Selective Attention	8.7	10.7	10.0	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	10.5	13.4	>>	Current ability level is likely more than sufficient
Visualization	7.5	10.3	11.7	>	Current ability level is likely sufficient
Time Sharing	6.6	8.5	7.0	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 71

Focus Occupation: Engineers, All Other (17-2199)
Associated Occupation: Industrial Engineers (17-2112)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Business function specific software	1
Cameras	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Development software	4
Electrical measuring and testing equipment	7
Hydraulic presses	25
Indicating and recording instruments	2
Industry specific software	1
Integrated circuits	18

Laboratory environmental conditioning equipment	24
Laboratory ovens and accessories	15
Length and thickness and distance measuring instruments	2
Light and wave generating and measuring equipment	4
Metals and metallurgy and structural materials testing instruments	15
Power generation control equipment	40
Sound generating and measuring equipment	19
Temperature and heat measuring instruments	6
Transducers	23
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.